

Gelman Sciences Inc.
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CASE NARRATIVE

Monthly Data Gelman Sciences
Project: 1,4-Dioxane Remediation
Date: May 2022

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition, all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Gelman Sciences Inc. attests to the validity of the laboratory data generated by Gelman Sciences Ann Arbor, Michigan Environmental Laboratory facilities reported herein. All analyses performed by Gelman Science's Environmental Laboratory facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Gelman Science's Environmental group has reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

At the end of the month some of the 1,4-dioxane samples were sent to Ann Arbor Technical Services for analysis due to a reproducibility problem. The balance of the samples was analyzed for 1,4-dioxane at Gelman Science's Environmental Laboratory. All bromate samples were analyzed by Gelman Science's Environmental Laboratory. The test results in this report meet all NELAP requirements for parameters for which accreditation are required or available. Any exceptions to NELAP requirements are noted in this report. All exceptions are noted per laboratory standard operating procedure based on EPA Method 1624c. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results. The odd even rule is used for rounding. Holding times were met for all samples analyzed. Proper preservation was observed on all samples unless otherwise detailed in the individual sections below. Samples MW-54d, 72d, and 71 were recollected due to questionable results.

RECEIPT/ STORAGE

The samples were received on the days noted in the report for the Month; the samples arrived in good condition, properly preserved and on ice when necessary. Samples that require 1,4-dioxane analysis are collected in hydrochloric HCl acid-preserved vials to a pH of ≤2, except for the Pall ozone treatment samples. These samples have chemicals that, when mixed with the HCl acid, cause interferences and trap damage. Every attempt is made to analyze these samples within 24 hours of receipt.

Samples that require Bromate analysis are collected and preserved in the laboratory with ethylene di-amine and refrigerated.

Samples that are delivered to the laboratory the same day as they are collected are likely not to have reached a fully chilled temperature. This is acceptable as long as there is evidence that chilling has begun. All samples are iced or refrigerated at 4°C ($\pm 2^\circ\text{C}$) from the time of collection until sample preparation or analysis.

1,4-Dioxane (GC-MS)

All ground water and treated water samples were analyzed for 1,4-Dioxane (GC-MS) in accordance with EPA 1624C, which has been modified to enhance detection limits. Samples that were diluted to bring them within the calibrated range of the instrument are noted with a "D" under the Qualifier Code section of the data report. Reporting limits were adjusted based on each dilution.

Reporting limit for undiluted samples is 1ppb (part per billion, micrograms per liter, µg/L). All quality control parameters were within the acceptance limits for reported samples unless indicated.

Bromate (Ion Chromatography)

All surface water and treated samples were analyzed for Bromate (Ion Chromatography) in accordance with EPA 300.1. Surrogates are added to all samples. All quality control parameters were within the acceptance limits with the balance of sample analyzed.

The reporting limit for treated samples is 5.0ppb and for surface samples is 2.0ppb.

Qualifiers

1,4-Dioxane Qualifier Codes:

<i>Qualifier Code</i>	<i>Description</i>
nd:	The compound was analyzed for, but not detected at or above the detection limit indicated.
D:	Analyte value quantified from a dilution; reporting limit is raised to reflect dilution.
E:	The compound result is greater than the upper quantitation limit in the associated calibration curve, reported as estimate.
B:	The sample vials contained air bubbles larger than 5mm, which may affect compound results.
J:	The compound was positively identified; the associated numerical value is the approximate concentration.
M:	Matrix effects, sample required dilution.
R:	The reported value is unusable and rejected due to variance from quality control criteria.
V:	The reported value is considered estimated due to variance from quality control criteria.
H:	Sample was analyzed past 14-day hold time, but within 45 days.
O:	Samples analyzed in outside laboratory.
S:	Samples split with DEQ.

Bromate Qualifier Codes:

<i>Qualifier Code</i>	<i>Description</i>
nd:	The compound was analyzed but was not detected at or above the detection limit indicated.
E:	The compound result is greater than the upper quantitation limit in the associated calibration curve.
J:	The compound was positively identified; the associated numerical value is the approximate concentration.
R:	The reported value is unusable and rejected due to variance from quality control criteria.
V:	The reported value is considered estimated due to variance from quality control criteria.
H:	Sample was analyzed past 28-day hold time

Analyst: Gage M. Trendel

Date: 6/10/22

Report Checked by: Mitchell Dominiski

Date: 6/10/22



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Sample Analysis Report

May, 2022

Analyst Initials: _____
Date: _____

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
Extraction Wells								
C3								
DOLPH-05-12-22-13:40-1	130	10						D
TW-10-05-12-22-12:55-1	350	10						D
TW-20-05-12-22-12:50-1	560	10						D
TW-24-05-24-22-08:00-1	2100	100						D
D2								
LB-4-05-12-22-10:30-1	770	10						D
TW-21-05-12-22-12:25-1	280	10						D
TW-5-05-12-22-12:35-1	610	10						D
E								
TW-17-05-12-22-12:45-1	70	10						D
TW-18-05-12-22-12:30-1	230	10						D
TW-23-05-12-22-10:55-1	290	10						D
TW-29-05-12-22-11:15-1	390	10						D
Marshy								
PW-1-05-18-22-07:35-1	800	10						D
SW								
TW-22-05-12-22-13:00-1	410	10						D
TW-28-05-12-22-13:30-1	530	10						D
TW-28-05-26-22-08:30-1	600	10						d

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
Monitoring Wells								
C3								
MW-144s-05-23-22-09:20-1	nd	1.0						
MW-18d-05-05-22-14:32-1	140	1.0						
MW-20-05-25-22-14:00-1	nd	1.0						
MW-34s-05-19-22-10:48-1	nd	1.0						
MW-35-05-05-22-10:31-1	2.1	1.0						
MW-37-05-27-22-13:50-1	240	10					d	
MW-38s-05-19-22-12:07-1	nd	1.0						
MW-39s-05-25-22-12:05-1	1.7	1.0						
MW-75-05-26-22-14:50-1	260	10						d
D0								
MW-137s-05-03-22-10:59-1	nd	1.0						o
MW-138i-05-02-22-12:05-1	8	1.0						o
MW-138s-05-02-22-10:53-1	nd	1.0						o
MW-139i-05-24-22-14:00-1	nd	1.0						
MW-139s-05-24-22-12:01-1	nd	1.0						
MW-53d-05-06-22-09:06-1	nd	1.0						
MW-53i-05-06-22-11:22-1	26	1.0						
MW-53s-05-06-22-10:13-1	nd	1.0						
D2								
MW-118-05-16-22-14:31-1	59	1.0						
MW-11d-05-05-22-11:51-1	230	10						d
MW-122s-05-17-22-12:20-1	280	10						d
MW-123s-05-03-22-14:46-1	nd	1.0						o
MW-124s-05-10-22-10:31-1	nd	1.0						

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
MW-126s-05-25-22-10:47-1	nd	1.0						
MW-129i-05-18-22-10:45-1	nd	1.0						
MW-129s-05-18-22-09:36-1	5.8	1.0						
MW-130i-05-16-22-11:52-1	6.2	1.0						
MW-130s-05-16-22-10:46-1	nd	1.0						
MW-133i-05-13-22-10:52-1	2.4	1.0						
MW-133s-05-13-22-09:40-1	1.4	1.0						
MW-17-05-31-22-12:34-1	230	10					d	
MW-34d-05-19-22-09:40-1	nd	1.0						
MW-38d-05-19-22-13:13-1	46	1.0						
MW-39d-05-25-22-13:16-1	14	1.0						
MW-4d-05-05-22-13:11-1	320	10						
MW-54d-05-17-22-09:52-1	270	10					D	
MW-54s-05-17-22-08:43-1	nd	1.0						
MW-KD-1d-05-16-22-14:50-1	660	10					D	
MW-KD-1s-05-17-22-13:40-1	130	10					d	

E

MW-100-05-18-22-14:40-1	1900	100						d
MW-103s-05-10-22-13:16-1	76	1.0						
MW-112i-05-09-22-11:50-1	8.7	1.0						
MW-112s-05-09-22-10:40-1	2.3	1.0						
MW-115-05-24-22-15:30-1	460	10						d
MW-116-05-24-22-10:27-1	740	10						d
MW-122d-05-17-22-11:11-1	nd	1.0						
MW-123d-05-03-22-13:36-1	nd	1.0						O
MW-124d-05-10-22-09:19-1	nd	1.0						
MW-126d-05-25-22-09:38-1	nd	1.0						

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
MW-129d-05-18-22-11:55-1	2.2	1.0						
MW-130d-05-16-22-13:02-1	nd	1.0						
MW-133d-05-13-22-12:07-1	3.7	1.0						
MW-137d-05-03-22-09:42-1	nd	1.0					O	
MW-138d-05-02-22-09:45-1	nd	1.0					O	
MW-139d-05-24-22-13:10-1	1.5	1.0						
MW-141d-05-01-22-14:02-1	4	1.0					O	
MW-144d-05-23-22-11:24-1	nd	1.0						
MW-144i-05-23-22-10:30-1	1.0	1.0						
MW-30d-05-31-22-11:08-1	76	1.0					d	
MW-30d-05-31-22-11:08-1	76	10					d	
MW-64-05-18-22-14:37-1	42	1.0						
MW-66-05-05-22-09:21-1	2.6	1.0						
MW-68-05-31-22-09:39-1	nd	1.0						
MW-72d-05-11-22-11:57-1	460	10					D	
MW-72s-05-13-22-13:52-1	2.6	1.0						
MW-76i-05-09-22-13:07-1	100	1.0						
MW-76s-05-09-22-14:16-1	300	10					D	
MW-84s-05-09-22-09:17-1	420	10					D	
MW-88-05-18-22-13:15-1	98	10					d	
MW-98d-05-10-22-11:56-1	20	1.0						

SW

MW-10d-05-23-22-13:02-1	60	10						D
MW-45d-05-27-22-12:22-1	810	10						d
MW-45s-05-27-22-11:15-1	2.4	1.0						
MW-46-05-26-22-12:00-1	72	1.0						
MW-49-05-26-22-10:44-1	nd	1.0						

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
MW-50-05-26-22-13:30-1	580	10						d
MW-52s-05-23-22-14:10-1	220	10						D
MW-57-05-26-22-09:23-1	4.8	1.0						
TW-4-05-27-22-09:52-1	30	1.0						

Surface Water

Not Applicable

HC/HR-05-02-22-09:30-1			nd	2.0				
HC/HR-05-03-22-09:30-1			nd	2.0				
HC/HR-05-04-22-09:40-1			nd	2.0				
HC/HR-05-05-22-11:30-1			nd	2.0				
HC/HR-05-06-22-10:25-1			nd	2.0				
HC/HR-05-09-22-10:10-1			nd	2.0				
HC/HR-05-10-22-12:15-1			nd	2.0				
HC/HR-05-11-22-09:40-1			nd	2.0				
HC/HR-05-12-22-10:10-1			nd	2.0				
HC/HR-05-13-22-12:45-1			nd	2.0				
HC/HR-05-13-22-12:45-1			nd	2.0				
HC/HR-05-16-22-12:35-1			nd	2.0				
HC/HR-05-17-22-11:30-1			nd	2.0				
HC/HR-05-18-22-10:30-1			nd	2.0				
HC/HR-05-19-22-11:05-1			nd	2.0				
HC/HR-05-20-22-11:00-1			nd	2.0				
HC/HR-05-23-22-12:00-1			nd	2.0				
HC/HR-05-24-22-09:30-1			nd	2.0				
HC/HR-05-25-22-11:30-1			nd	2.0				
HC/HR-05-26-22-10:25-1			nd	2.0				
HC/HR-05-27-22-09:30-1			nd	2.0				

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
HC/HR-05-31-22-11:10-1			nd	2.0				
Treatment System								
OUTFALL-05-01-22-1	6	1.0						O
OUTFALL-05-01-22-2			11	5.0				
OUTFALL-05-02-22-1	6	1.0						O
OUTFALL-05-02-22-2			9.2	5.0				
OUTFALL-05-03-22-1	6	1.0						O
OUTFALL-05-03-22-2			9.2	5.0				
OUTFALL-05-04-22-1	7	1.0						O
OUTFALL-05-04-22-2			13	5.0				
OUTFALL-05-05-22-1	7	1.0						O
OUTFALL-05-05-22-2			12	5.0				
OUTFALL-05-08-22-1	6.3	1.0						
OUTFALL-05-08-22-2			12	5.0				
OUTFALL-05-09-22-1	6.9	1.0						
OUTFALL-05-09-22-2			11	5.0				
OUTFALL-05-10-22-1	6.5	1.0						
OUTFALL-05-10-22-2			11	5.0				
OUTFALL-05-11-22-1	6.8	1.0						
OUTFALL-05-11-22-2			8.6	5.0				
OUTFALL-05-12-22-2	8.1	1.0						
OUTFALL-05-12-22-			8.3	5.0				
OUTFALL-05-15-22-1	5.5	1.0						
OUTFALL-05-15-22-2			5.5	5.0				
OUTFALL-05-16-22-1	6.5	1.0						
OUTFALL-05-16-22-2			7.8	5.0				
OUTFALL-05-17-22-1	5.0	1.0						

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
OUTFALL-05-17-22-2			8.0	5.0				
OUTFALL-05-18-22-1	6.0	1.0						
OUTFALL-05-18-22-2			6.3	5.0				
OUTFALL-05-19-22-1	6.0	1.0						
OUTFALL-05-19-22-2			5.6	5.0				
OUTFALL-05-22-22-1	4.3	1.0						
OUTFALL-05-22-22-2			27	5.0				
OUTFALL-05-23-22-1	6.2	1.0						
OUTFALL-05-23-22-2			6.0	5.0				
OUTFALL-05-24-22-1	5.5	1.0						
OUTFALL-05-24-22-2			6.3	5.0				
OUTFALL-05-25-22-1	5.9	1.0						
OUTFALL-05-25-22-2			5.4	5.0				
OUTFALL-05-26-22-1	5.4	1.0						
OUTFALL-05-26-22-2			6.1	5.0				
OUTFALL-05-29-22-1	6.7	1.0						
OUTFALL-05-29-22-2			7.6	5.0				
OUTFALL-05-30-22-1	6.1	1.0						
OUTFALL-05-30-22-2			7.4	5.0				
OUTFALL-05-31-22-1	5.2	1.0						
OUTFALL-05-31-22-2			6.6	5.0				
Red Pond-05-02-22-07:10-1	510	40					O,D	
Red Pond-05-03-22-07:30-1	610	40					O,D	
Red Pond-05-04-22-07:45-1	580	40					O,D	
Red Pond-05-05-22-09:50-1	500	40					O,D	
Red Pond-05-06-22-07:20-1	630	40					O,D	
Red Pond-05-09-22-07:10-1	440	10					D	

Sample Name - Date/Time Sampled	1,4-Dioxane Results (ppb)	R.L. (ppb)	Bromate Results (ppb)	R.L. (ppb)	Bromide Results (ppb)	R.L. (ppb)	Comments	Qualifier(s)
Red Pond-05-10-22-07:40-1	440	10						D
Red Pond-05-11-22-07:10-1	450	10						D
Red Pond-05-12-22-07:50-1	400	10						D
Red Pond-05-12-22-07:50-1	400	10						D
Red Pond-05-16-22-10:00-1	340	10						D
Red Pond-05-23-22-08:00-1	390	10						D
Red Pond-05-31-22-07:55-1	440	10						D



LABORATORY OPERATIONS
CASE NARRATIVE

ATS Project Number: G001-002
Report Date: 5/9/22
SRF / SDG Number(s): 0503221
Client PO Number: 4505179649

ORGANIC ANALYSIS
1,4-Dioxane by GC/MS
USEPA 1624

ATS Project Number: G001-002.22

ATS SDG: 0503221

Case Narrative Summary

This case narrative applies to the following 6 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 5/5/22, and associated matrix-specific QA/QC:

Samples

Client Sample Identification	Sample Date	Reported Turn Around Time	Analyst	Matrix
Received 5/5/22				
Overall (n)	5/5/22	Upfront	1,4-Dioxane	Water
Red Pond	5/5/22	Upfront	1,4-Dioxane	Water
MW-16d	5/5/22	Standard	1,4-Dioxane	Water
MW-16a	5/5/22	Standard	1,4-Dioxane	Water
MWD	5/5/22	Standard	1,4-Dioxane	Water
MW-14d	5/5/22	Standard	1,4-Dioxane	Water

Upon receipt samples were scheduled for the following analyses.

Analyses

- 1,4-Dioxane (USP/PA 1624) – Upfront TAT
- 1,4-Dioxane (USP/PA 1624) – Standard TAT
- 4 Samples

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of custody records included. Sample conditions and anomalies, if any, are either presented in the "Sample Receipt" section of this report or in the comments on individual data sheets. All samples were prepared and analyzed within 45 days of the following exceptions:

- None

Prepared By:
Ann Arbor Technical Services, Inc.
290 South Wagner Road
Ann Arbor, MI 48103

G001-002.22-CH_0503221.doc
Correlations in Chemistry & Environmental Science
290 South Wagner Road, Ann Arbor, Michigan 48103 Tel 734/925-0550 Fax 734/925-3731

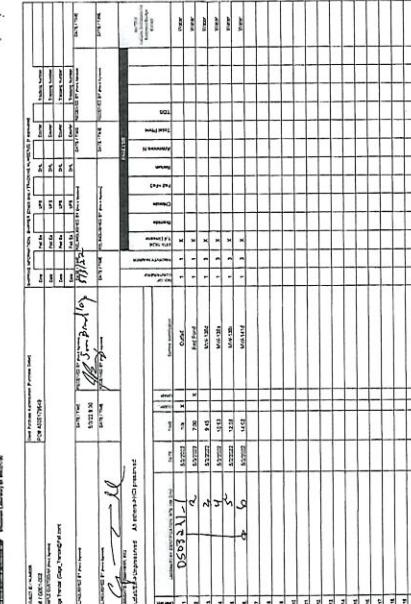


CHART OF CUSTOM RECORD

ATS Logo

PRECISION

Matrix Spike and Matrix Spike Duplicates - Precision

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed as part of the QA/QC batch. The MS/MSD's met the precision acceptance criteria with the following exception:

- None

Mark DeLong

/ May 5, 2022

Mark T. DeLong (Quality Assurance Coordinator)

Philip R. Simon

/ May 5, 2022

Philip R. Simon (Laboratory Director)

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Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written standard operating procedure (SOP) specific to the laboratory instrument, as well as the analyst's knowledge. All data are peer and management reviewed and approved in accordance with the above referenced SOP's and project specifications. In addition, all data conform to the laboratory's Quality Assurance / Quality Control Manuals.

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (ML), LRD, fortified blanks (BS, LFD, LCS), matrix spikes (LFSM, MS, SPK), and duplicates whether spiked or native (LMFD, MSD, SPK, DUP, DUD, LR).

Data Qualifications, Specifications, and Technical Narration

The following are qualifier descriptions that may be used throughout this SDS and are presented with their associated samples in each SDS section as appropriate:

- "U" – exceeds the calibration range of the method
- "D" – result taken from sample dilution
- "MDL" – concentration reported between the Laboratory/Instrument determined Method Detection Limit (MDL) and Quantification Limit (QDL) and the Practical Quantitation Limit (PQL)/Limit of Quantification (LOQ)
- "MDL" – concentration reported below the laboratory/instrument Method Detection Limit (MDL)/Limit of Quantification (LOQ) and the instrument Signal To Noise Ratio (S/N) of approximately 10:1
- "T" – analyze concentration in method blank exceeds reporting limit
- "L" – analyze not detected below MDL / LOQ
- "N" – indicate no spike or duplicate added
- "M" – indicate matrix interference
- "R" – indicate run time between 15% – 30% of acceptable window
- "N" – indicate run time outside 30% acceptance window and result is Not Reported

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (ML), LRD, fortified blanks (BS, LFD, LCS), matrix spikes (LFSM, MS, SPK), and duplicates whether spiked or native (LMFD, MSD, SPK, DUP, DUD, LR).

Data Deliverables

This data package constitutes a Level II package; other data report packages (Level I, Level IV DVP, EPA R5 EDD) are available upon request. There were no laboratory data summary sheets generated for this project.

Sample Analysis

1,4-Dioxane Analysis (GC/MS): Samples were analyzed by purge and trap GC/MS in accordance with USEPA method 1624 (Volatile Organic Compounds by Isotope Dilution Gas Chromatography – Mass Spectrometry). An internal standard with at least five levels was used to quantitate 1,4-Dioxane. Samples were reported to project specific reporting limits. Samples were reported as mg/L.

Assay/Analyte Notes:

- None

G001-002.22-CH_0503221.doc

ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

LABORATORY BLANK SUMMARY

Method ID: G001-002.22-CH_0503221

Method Name: G001-002.22-CH_0503221

Method Number: G001-002.22-CH_0503221

Project Number: 0503221

Project Name: 0503221

Report Date: 5/5/2022

Laboratory Regent Blank (LRB) / Method Blank (MB)

Method ID: G001-002.22-CH_0503221

Method Name: G001-002.22-CH_0503221

Method Number: G001-002.22-CH_0503221

Project Number: 0503221

Project Name: 0503221

Report Date: 5/5/2022

Report Type: 0503221

Report ID: 0503221

Report Name: 0503221

Report Version: 0503221

Report Status: 0503221

Report Type: 0503221

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Report Type: 0503221

Report ID: 0503221

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Report Type: 0503221

Report ID: 0503221

Report Name: 0503221

Report Version: 0503221

Report Status: 0503221

Report Type: 0503221

Report ID: 0503221

Report Name: 0503221

Matrix Spike (MS)									
Lab Sample ID	Sample Name	Sample Date	Sample Time	Sample Type	Analysis	Run No.	Method	Run Date	Run Time
0001-0022	0001-0022	05/22/2022	14:23:24	1-Dioxane	0001-0022	0001-0022	0001-0022	05/22/2022	14:23:24

ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

LABORATORY ACCURACY SUMMARY

Matrix Spike Duplicate (MSD)									
Lab Sample ID	Sample Name	Sample Date	Sample Time	Sample Type	Analysis	Run No.	Method	Run Date	Run Time
0001-0022	0001-0022	05/22/2022	14:23:24	1-Dioxane	0001-0022	0001-0022	0001-0022	05/22/2022	14:23:24

ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

LABORATORY PRECISION SUMMARY

Matrix Spike (MS)									
Lab Sample ID	Sample Name	Sample Date	Sample Time	Sample Type	Analysis	Run No.	Method	Run Date	Run Time
0001-0022	0001-0022	05/22/2022	14:23:24	1-Dioxane	0001-0022	0001-0022	0001-0022	05/22/2022	14:23:24



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Ann Arbor, MI 48106-2923
Tel: 734/995-0202 Fax: 734/995-0201
MassSpec Laboratory (2) VERSATYME

Data Transmittal Cover Page

Project Name: Pall Corporation

ATS Project Number: G001-002

ATS Report Number(s): Org_SRF_0504221

Client PO Number: 4505179549

Project Description: This data report contains the results of 6 water samples, received by ATS on May 04, 2022 to be analyzed for 1,4-Dioxane.

We certify that the sample analysis for this report have been conducted in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written Standard Operating Procedure specific to the ATS Laboratory, as reviewed by USEPA. All data are peer and management reviewed to ensure compliance with the above referenced SOP's and project specification. In addition, all data conforms to the laboratory's Quality Assurance / Quality Control Manual.

Recipient: Mr. Gage Trindell Email: jgtrindell@pall.com
FAX Number: _____
No. of Pages (including cover pg.): 18
From: Sarah Shubbefield, Senior Chemist/Lab Manager Email: Sarah.Shubbefield@AnnArborTechnicalServices.com
FAX Number: 734-995-3721
Additional Message: Copy report to: Patterson, Keith (keith.patterson@pall.com), Brode, Jim (jim.brode@pall.com), Katie Strehauer (katie.strehauer@pall.com), Petrie, Sue (sue.petrie@pall.com), Amanda Isabelle (amanda.isabelle@pall.com)

Date: 5/9/22 Signed:

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Sample Dilutions

Samples containing compounds at concentrations above the initial calibration curve were diluted and reanalyzed for these compounds. The following samples were diluted for 1,4-Dioxane:

- Red Pond

Laboratory Reagent Blanks

A laboratory reagent blank (LRB) was analyzed as part of the QA/QC batch. The LRB met the acceptance criteria with the following exception:

- None

Internal Standards and Surrogates - Quantitation

This method utilizes Internal Standards only, not Surrogates. Internal standards areas and retention times met the acceptance criteria with the following exception:

- None

ACCURACY

LFBOPR Blanks (LFBO/PRI) Laboratory Control Samples - Accuracy

A laboratory fortified blank (LFBO/PRI) was analyzed as part of the QA/QC batch. The LFBO/PRI met the acceptance criteria with the following exception:

- None

Matrix Spikes and Matrix Spike Duplicates - Accuracy

A matrix spike (MS) and matrix spike duplicate (MSD) was analyzed as part of the QA/QC batch. The MS/MSD's met the accuracy acceptance criteria with the following exception:

- None

Prepared By:
Ann Arbor Technical Services, Inc.
290 South Wagner Road
Ann Arbor, MI 48103

ATS Project Number: G001-002.22

ATS SDG: 0504221

LABORATORY OPERATIONS CASE NARRATIVE

ATS Project Number: G001-002

Report Date: 5/9/22

SRF / SDG Number(s): 0504221

Client PO Number: 4505179549

Case Narrative Summary

This case narrative applies to the following 6 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 5/9/22, and associated matrix-specific QA/QC.

Samples

Client Sample Identification	Sample Date	Received/Turn Around Time	Analysis	Matrix
Received 001	5/9/22	Urgent	1,4-Dioxane	Water
Outfall 001	5/9/22	Urgent	1,4-Dioxane	Water
Red Pond	5/9/22	Urgent	1,4-Dioxane	Water
MW-174	5/9/22	Standard	1,4-Dioxane	Water
MW-175	5/9/22	Standard	1,4-Dioxane	Water
MW-176	5/9/22	Standard	1,4-Dioxane	Water
MW-177	5/9/22	Standard	1,4-Dioxane	Water

Upon receipt samples were scheduled for the following analyses:

- Analysis Number of Samples
- 1,4-Dioxane (USEPA, 0424) - Urgent TAT
 - 1,4-Dioxane (USEPA, 0424) - Standard TAT
 - 4 Samples

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of custody records included. Sample condition and anomalies, if any, are either presented in the "Sample Receipt" section of this report or in the comments on individual data sheets. All samples were prepared and analyzed within 48 hours of receipt.

None

G001-002.22\CH_0504221.xls
Consultants in Chemistry & Environmental Science
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G001-002.22\CH_0504221.xls
ATS

G001-002.22\CH_0504221.xls

ATS

Method	USEPA 1624
QC Sample Number	0505179649
SDG	0505179622
Project Number:	G001-002
Report Date:	5/9/2022
Matrix Spike Duplicate (MSD)	
Sample ID	
Sample Name	
Sample Description	
Sample Type	
Sample Matrix	
Sample Volume	
Sample Weight	
Sample Temperature	
Sample pH	
Sample Density	
Sample Viscosity	
Sample Color	
Sample Odor	
Sample Consistency	
Sample Source	
Sample Preparation	
Sample Storage	
Sample Handling	
Sample Preparation Notes	
Sample Analysis Notes	
Sample Disposal Notes	

ANN ARBOR TECHNICAL SERVICES, INC.

QUALITY ASSURANCE/QUALITY CONTROL SUMMARY

LABORATORY PRECISION SUMMARY

Method	USEPA 1624	Q/C Sample Number	0505179622	SDG	0505179622	Report Date	5/9/2022
Level I	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622
Level II	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622
Level III	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622
Matrix Spike (MS)							
Matrix Spike & Matrix Spike Duplicate (MSD)							
Level I Sample ID	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622
Level II Sample ID	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622
Level III Sample ID	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622	0505179622
Matrix	Water	Water	Water	Water	Water	Water	Water
Sample Type	Water	Water	Water	Water	Water	Water	Water
Sample Matrix	Water	Water	Water	Water	Water	Water	Water
Sample Volume	1 mL	1 mL	1 mL	1 mL	1 mL	1 mL	1 mL
Sample Weight	0.0000 g	0.0000 g	0.0000 g	0.0000 g	0.0000 g	0.0000 g	0.0000 g
Sample Temperature	23 °C	23 °C	23 °C	23 °C	23 °C	23 °C	23 °C
Sample pH	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Sample Viscosity	1.0 cP	1.0 cP	1.0 cP	1.0 cP	1.0 cP	1.0 cP	1.0 cP
Sample Color	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless	Colorless
Sample Odor	None	None	None	None	None	None	None
Sample Consistency	Homogeneous	Homogeneous	Homogeneous	Homogeneous	Homogeneous	Homogeneous	Homogeneous
Sample Source	Tap Water	Tap Water	Tap Water	Tap Water	Tap Water	Tap Water	Tap Water
Sample Preparation	None	None	None	None	None	None	None
Sample Storage	None	None	None	None	None	None	None
Sample Handling	None	None	None	None	None	None	None
Sample Preparation Notes							
Sample Analysis Notes							
Sample Disposal Notes							

Data Qualifications, Specifications, and Technical Narration

The following are qualitative descriptions that may be used throughout this SDG and are presented with their associated samples in each SDG section as appropriate:

- "T" = exceeds the calibration range of the method
- "D" = result taken from sample dilution
- "P" = concentration reported between the laboratory-determined Method Detection Limit (MDL) (Limit of Detection), and the Method Quantitation Limit (LOQ).
- "LQ" = concentration reported below the laboratory-determined Method Detection Limit (MDL) / Limit Of Quantitation (LOQ) and the instrument Signal To Noise Ratio (S/N) of approximately 10:1
- "B" = analysis concentration in method blank exceeds reporting limit
- "P" = analysis corrected above MDL / LOQ
- "R" = analysis corrected below MDL or sample specific QA/QC control limits
- "M" = indicates matrix interference
- "N" = indicates ion ratio between 15 and 20 % acceptance window
- "NR" = indicates no min. 30% acceptance window and result is Not Reported

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB), LRBs, fortified blanks (BS, LPB, LCS), matrix spikes (SPM, MS, SPK), and duplicates whether spiked or native (FMD, MSD, SPK DUP, LR).

Data Deliverables

This case narrative applies to the following 2 samples that were received at Ann Arbor Technical Services, Inc. (ATS) on 5/9/22, and associated matrix-specific QA/QC.

Samples

Client Sample Identification	Sample Date	Reported Turn Around Time	Analysis	Matrix
Received: 5/9/22				
Overall 001	5/9/22	Urgent	1,4-Dioxane	Water
Overall 002	5/9/22	Urgent	1,4-Dioxane	Water

Upon receipt samples were scheduled for the following analyses:

Analyses

- 1,4-Dioxane (USEPA 1624) - Urgent TAT
- 3 Samples + 1 Matrix Spike + 1 Matrix Spike Duplicate

Sample Receipt, Chain of Custody Records, and Holding Times

Samples were delivered directly to ATS by Pall Corporation staff. Samples were received with proper chain of custody records included. Sample conditions and anomalies, if any, are either presented in the "Sample Receipt" section of this report or in the comments on individual data sheets. All samples were prepared and analyzed within 45 days of the following exceptions:

None

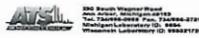
Data Review and Approval

All data contained in this report have been generated in accordance with guidelines provided in the referenced standard test method, and are the result of detailed procedures developed in a written standard operating procedure (SOP) approved by the ATS Laboratory Manager or USEPA. All data are peer and management reviewed to ensure compliance with the above referenced SOP's and project specifications. In addition, all data conforms to the laboratory's Quality Assurance / Quality Control Manuals.

A single QA/QC batch is defined as no more than 20 samples excluding method blanks (MB), LRBs, fortified blanks (BS, LPB, LCS), matrix spikes (SPM, MS, SPK), and duplicates whether spiked or native (FMD, MSD, SPK DUP, LR).

Comments on Chemistry & Environmental Science

200 South Wagner Road, Ann Arbor, Michigan 48103 Tel 734/995-0995 Fax 734/995-3731



Data Transmittal Cover Page

Project Name: Pall Corporation
 ATS Project Number: G001-002
 ATS Report Number(s): Org_SRF_0505221
 Client PO Number: 4505179649
 Project Description: This data report contains the results of 2 water samples, received by ATS on May 09, 2022 to be analyzed for 1,4-Dioxane.

We certify that the sample analyses for this report have been conducted in accordance with guidelines provided in the referenced standard test method, and are consistent with detailed procedures described in a written Standard Operating Procedure (SOP). Sample data is presented in the following tables. All data is peer-reviewed, and QC/PQ and QA/QC information are available for inspection and audit at the laboratory upon request. Unless specifically noted on the data report, all analytical sample preservation and holding time requirements have been met.

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 FAX Number:

No. of Pages (including cover pg.): 13

From: Sarah Shubbefield Email: Sarah_Shubbefield@AnnArborTechnicalServices.com
 Senior Chemist / Lab Manager
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Additional Message: Cc/Dcc report to: Patterson, Keith (keith_patterson@pall.com), Brode, Jim (jim_brode@pall.com)
 Katie Simshauer (katie@patterson.com), Peters, Sue Peters (sue_peters@pall.com)
 Amanda Hubella (amanda_hubella@pall.com)

Date: 5/9/22 Signed:

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ORGANIC ANALYSIS
1,4-Dioxane by GC/MS
USEPA 1624

Prepared By:
 Ann Arbor Technical Services, Inc.
 290 South Wagner Road
 Ann Arbor, MI 48103

ATS Project Number: G001-002.22
 ATS SDG: 0506221

CHAIN OF CUSTODY RECORD											
Project Number: G001-002.22											
Sample ID: 0505179622											
Sample Name: 1,4-Dioxane											
Sample Description: Water											
Sample Type: Water											
Sample Matrix: Water											
Sample Volume: 1 mL											
Sample Weight: 0.0000 g											
Sample Temperature: 23 °C											
Sample pH: 7.0											
Sample Viscosity: 1.0 cP											
Sample Color: Colorless											
Sample Odor: None											
Sample Consistency: Homogeneous											
Sample Source: Tap Water											
Sample Preparation: None											
Sample Storage: None											
Sample Handling: None											
Sample Preparation Notes:											
Sample Analysis Notes:											
Sample Disposal Notes:											
Acceptance Criteria:											
Instrument: GC/MS											
Acceptance Limit: 10% RSD											
Acceptance Period: 45 days											
Acceptance Frequency: 1											
Acceptance Window: ± 20%											
Acceptance Units: %											
Acceptance Range: 80-120%											
Acceptance Tolerance: 20%											
Acceptance Units: %											
Acceptance Range: 80-120%											
Acceptance Tolerance: 20%											
Acceptance Units: %											
Acceptance Range: 80-120%											
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Acceptance Range: 80-120%											
Acceptance Tolerance: 20%											
Acceptance Units: %											
Acceptance Range: 80-120%											
Acceptance Tolerance: 20%											
Acceptance Units: %											
Acceptance Range: 80											



1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	Water
Laboratory Sample ID	0003221-0
Matrix	Water
Sample Date	05/03/2022 7:30
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 40
Matrix Water
Sample Date 05/03/2022 7:30
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/03/2022 10:41:22Parameter CASE Result MDL PQL Qual
1,4-Dioxane 123-01-1 0.01 0.04 M

1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	MW-130
Laboratory Sample ID	0003221-1
Matrix	Water
Sample Date	05/03/2022 9:45
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 40
Matrix Water
Sample Date 05/03/2022 9:45
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/03/2022 11:25:25Parameter CASE# Result MDL PQL Qual
1,4-Dioxane 123-01-1 ND 0.001 U

1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	MW-130
Laboratory Sample ID	0003221-5
Matrix	Water
Sample Date	05/03/2022 10:53
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 1
Matrix Water
Sample Date 05/03/2022 10:53
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/03/2022 12:09:24Parameter CASE# Result MDL PQL Qual
1,4-Dioxane 123-01-1 ND 0.001 U

1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	MW-130
Laboratory Sample ID	0003221-5
Matrix	Water
Sample Date	05/03/2022 12:05
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 1
Matrix Water
Sample Date 05/03/2022 12:05
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/03/2022 12:03:24Parameter CASE# Result MDL PQL Qual
1,4-Dioxane 123-01-1 0.008 0.001 U

1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	Water
Laboratory Sample ID	0003221-0
Matrix	Water
Sample Date	05/03/2022 7:30
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 40
Matrix Water
Sample Date 05/03/2022 7:30
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/03/2022 13:37:22Parameter CASE# Result MDL PQL Qual
1,4-Dioxane 123-01-1 0.004 0.001 M

1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	Water
Laboratory Sample ID	0003221-1
Matrix	Water
Sample Date	05/03/2022 9:45
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 40
Matrix Water
Sample Date 05/03/2022 9:45
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/03/2022 11:32:38Parameter CASE# Result MDL PQL Qual
1,4-Dioxane 123-01-1 0.008 0.001 U

1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	MW-130
Laboratory Sample ID	0003221-3
Matrix	Water
Sample Date	05/03/2022 11:30
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 1
Matrix Water
Sample Date 05/03/2022 11:30
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/04/2022 11:18:33Parameter CASE# Result MDL PQL Qual
1,4-Dioxane 123-01-1 ND 0.004 M

1,4-Dioxane by GC/MS

Data Summary Sheet

AT5 Project Number	G001-002-22
AT5 BDO Number	0003221
Client Sample ID	MW-130
Laboratory Sample ID	0003221-5
Matrix	Water
Sample Date	05/03/2022 11:42
Analytical Method (USEPA)	USEPA 1624
Preparation Method (USEPA)	USEPA 1624
GC Batch Number	GCDHG003221

Percent Moisture 100.0
Instrument 2100V
Subsample (mL) 5.000
Final Volume (mL) 5.000
Dilution Factor 1
Matrix Water
Sample Date 05/03/2022 11:42
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
Analysis Date 05/04/2022 12:00:32Parameter CASE# Result MDL PQL Qual
1,4-Dioxane 123-01-1 ND 0.001 U

1,4-Dioxane by GC/MS
Data Summary Sheet

ATS Project Number G001-0022
ATS SDO Number 0000221
Client Sample ID MW-137a
Laboratory Sample ID 0004221-4
Matrix Water
Sample Date 05/04/2023 10:59
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
QC Batch Number QCDHG004221

Parameter CAS# Result MDL PQL Qual
1,4-Dioxane 123-91-1 ND 0.001 U

Comments:
• Includes method reporting limit based open sample dilution.
• Includes method reporting limit based confirmation standard.
• Includes method reporting limit based detection limit.

1,4-Dioxane by GC/MS
Data Summary Sheet

ATS Project Number G001-0022
ATS SDO Number 0004221
Client Sample ID MW-137a
Laboratory Sample ID 0004221-4
Matrix Water
Sample Date 05/04/2023 13:36
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
QC Batch Number QCDHG004221

Parameter CAS# Result MDL PQL Qual
1,4-Dioxane 123-91-1 ND 0.001 U

Comments:
• Includes method reporting limit based open sample dilution.
• Includes method reporting limit based confirmation standard.
• Includes method reporting limit based detection limit.

1,4-Dioxane by GC/MS
Data Summary Sheet

ATS Project Number G001-0022
ATS SDO Number 0004221
Client Sample ID MW-137a
Laboratory Sample ID 0004221-4
Matrix Water
Sample Date 05/04/2023 14:46
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
QC Batch Number QCDHG004221

Parameter CAS# Result MDL PQL Qual
1,4-Dioxane 123-91-1 ND 0.001 U

Comments:
• Includes method reporting limit based open sample dilution.
• Includes method reporting limit based confirmation standard.
• Includes method reporting limit based detection limit.

1,4-Dioxane by GC/MS
Data Summary Sheet

ATS Project Number G001-0022
ATS SDO Number 0005271
Client Sample ID ODEA
Laboratory Sample ID 0005271-1
Matrix Water
Sample Date 05/04/2022 14:04
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
QC Batch Number QCDHG004221

Parameter CAS# Result MDL PQL Qual
1,4-Dioxane 123-91-1 ND 0.001 U

Comments:
• Includes method reporting limit based open sample dilution.
• Includes method reporting limit based confirmation standard.
• Includes method reporting limit based detection limit.

1,4-Dioxane by GC/MS
Data Summary Sheet

ATS Project Number G001-0022
ATS SDO Number 0000221
Client Sample ID Red Pend
Laboratory Sample ID 0005271-2
Matrix Water
Sample Date 05/04/2023 9:50
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
QC Batch Number QCDHG004221

Parameter CAS# Result MDL PQL Qual
1,4-Dioxane 123-91-1 0.00 0.04 M

Comments:
• Includes method reporting limit based open sample dilution.
• Includes method reporting limit based confirmation standard.
• Includes method reporting limit based detection limit.

1,4-Dioxane by GC/MS
Data Summary Sheet

ATS Project Number G001-0022
ATS SDO Number 0002221
Client Sample ID Oxid
Laboratory Sample ID 0005271-1
Matrix Water
Sample Date 05/04/2022 08:00
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
QC Batch Number QCDHG004221

Parameter CAS# Result MDL PQL Qual
1,4-Dioxane 123-91-1 0.027 0.001 U

Comments:
• Includes method reporting limit based open sample dilution.
• Includes method reporting limit based confirmation standard.
• Includes method reporting limit based detection limit.

1,4-Dioxane by GC/MS
Data Summary Sheet

ATS Project Number G001-0022
ATS SDO Number 0002221
Client Sample ID Oxid
Laboratory Sample ID 0005271-2
Matrix Water
Sample Date 05/04/2022 7:28
Analytical Method (USEPA) USEPA 1624
Preparation Method (USEPA) USEPA 1624
QC Batch Number QCDHG004221

Parameter CAS# Result MDL PQL Qual
1,4-Dioxane 123-91-1 0.03 0.04 M

Comments:
• Includes method reporting limit based open sample dilution.
• Includes method reporting limit based confirmation standard.
• Includes method reporting limit based detection limit.



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